

TROPICAL STORM *IRENE* IN NEW YORK STATE

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“Pick at random an American bird of the sea or beach that summers regularly in the subtropical regions of the North Atlantic. Now scan the [last] three regional accounts in this magazine, those for [eastern New York State]. The chances are 2 to 1 [or greater] that you will find your bird listed there. Did you select Magnificent Frigatebird perhaps? One visited [Columbia County].... White-tailed Tropicbird? [Six were recorded from Rensselaer County to eastern Long Island.] ... The Brown Pelican? [At least 7 were found on Long Island during and immediately after the storm.]”

--R. J. Newman and R. F. Andrle, *The Changing Seasons: A Summary of Bird Events in the Autumn of “Donna”* Audubon Field Notes, Vol. 15, p. 4.

Tropical Storm *Irene* will be remembered as perhaps the most ornithologically interesting—and certainly the most thoroughly observed and documented—cyclone ever recorded in New York. The quote cited above pertains to Hurricane *Donna*, which struck Long Island on 12 September 1960. The portions in brackets have been tailored to express *Irene*’s remarkably similar consequences. Because *Irene*’s eye traveled almost entirely over water (just clipping the Outer Banks, then passing rapidly over easternmost New Jersey at night), and because her center of circulation made landfall on Long Island almost as far west as possible, her track was near-perfect for driving tropical-pelagic and Gulf Stream species ashore here. Furthermore, it was evident as early as mid-day on Friday, 26 August that her intensity would weaken considerably just prior to landfall, reducing safety concerns (if not coastal access issues) for bird students. Compared to their predecessors in 1960, the cadre of birders who greeted *Irene* were more numerous, better informed of the storm’s immediate meteorological and ornithological history, and infinitely better connected with one another via cell phones.

Irene’s avian fall-out was striking in terms of its volume, diversity, and geographical breadth. Determined observers managed to sample a very large variety of sites, from the Hudson and East Rivers, the Verrazano Narrows, Brooklyn’s near-coast, the Jones Beach strip, most of the South Fork of Long Island, southwestern Long Island Sound in Westchester County and the Bronx, and several sites on Long Island’s North Shore. Without exception, all of these sites yielded multiple extraordinary, once in a generation, records. There was one very large and conspicuous gap in coverage, however, involving the perennially highly productive mid-section of Long Island’s oceanfront,

including Fire Island, Moriches, and Shinnecock Inlets. Access to these sites was almost completely precluded, and an unknown number and variety of birds certainly went unseen there.

Within the very large list of species recorded during *Irene*, several striking patterns were evident. First, the volume and proportion of tropical-pelagic and Gulf Stream species were unprecedented. Reports of Bridled Tern (28+), White-tailed Tropicbird (6+), South Polar Skua (3 reports of 4 birds), Band-rumped Storm-Petrel (2+), and Black-capped Petrel (1) all equaled or exceeded those of any prior storm in New York. Robust tallies of 36+ Sooty Terns and 21+ Leach's Storm-Petrels, as well as single reports of Audubon's Shearwater (from the Bronx!) and Magnificent Frigatebird (from Columbia County!), were also consistent with this pattern. The most wayward White-tailed Tropicbird was one picked up along a road in Rensselaer County; Sooty and Bridled Terns were seen in western Long Island Sound, and five of the former and one of the latter pushed as far up the Hudson River as Croton Pt. and Tarrytown, respectively.

It must be noted that all of these deep-water species present identification challenges, particularly the *Onychoprion* terns, skuas, and storm-petrels. It appears, for instance, that some Bridled Terns might have been mistaken for Sooties, because the proportion of Sooty to Bridled was fairly low among birds that were photographed but increased noticeably among reports of distant *Onychoprion* that couldn't be photographed. Nevertheless, it is very reassuring that photos or written documentation were obtained for at least some examples of each of these highly significant species, and furthermore, that every one of these species (except possibly the shearwater) was also photographed in nearby states during the storm.

With the exception of a corpse or two found later, the entirety of this Gulf Stream cohort was observed on 28 August, with none lingering even through the following morning for observers pursuing the previous day's stunning reports. Thus, in comparing *Irene*'s conspicuous bounty of Gulf Stream birds to the lesser yields of prior storms, one must consider the likely possibility that much of the apparent discrepancy is attributable to *Irene*'s lesser intensity at landfall, which resulted in much greater safety, comfort, and prior knowledge of likely conditions for observers this time around, compared to during similar storms of the past. Four historical examples support this point. The over-water track of the Great Hurricane of 21 September 1938 was similar (but more easterly) to *Irene*'s, but this storm struck Long Island and southern New England with unique ferocity, nearly eradicating all man-made structures on the outer beaches of eastern Long Island and Rhode Island. Not only was it impossible to look for birds during this storm, it was impossible to safely reach the coast for days afterward in many areas. Of the few vagrants reported after this storm were five White-tailed Tropicbirds (four dead) on Long Island and a Sooty Tern inland at Manorville, Suffolk County.

Hurricane *Donna* (12-13 September 1960) also followed a track similar to *Irene*'s, except that she crossed a long swath of peninsular Florida early in her journey, and she struck Long Island at hurricane-strength. Interestingly, roughly half of the tropical strays associated with *Donna* in the Mid-Atlantic and

Northeast states were seen the day after the storm's passage—in stark contrast to the near-absence of such records following *Irene*. This disparity suggests that a larger proportion of *Donna*'s pelagic birds went undetected on the day she struck, probably because the smaller number of observers faced more severe conditions. Yet another example of this sort is furnished by Hurricane *Bob* of 19 August 1991, which produced a variety of records of Gulf Stream birds, some persisting for at least a day.

Another useful, but contrasting, comparison was provided by *David*, on 6 September 1979, which followed a course that differed greatly from all the storms just mentioned. *David* made landfall in Georgia and weakened greatly as he proceeded northward through Pennsylvania and upstate New York. Winds along the Long Island/southern New England coast were reportedly in the 30-40 mph range (R. L. Ferren, in litt.), but these fringing winds brought to our shores an assemblage of Gulf Stream species that rivaled *Irene*'s: a larger number of Sooty but a smaller number of Bridled Terns; a Brown Noddy in Rhode Island; etc. Importantly, the most noteworthy tropical-pelagic species were recorded during the storm's passage, with almost none persisting after this locally very weak storm.

Another pattern in *Irene*'s records, this one in stark contrast to that of the deep-water species discussed above, concerns our most abundant temperate-pelagic species, which were clearly under-represented. This category includes species such as Great, Cory's, and Manx Shearwaters, Wilson's Storm-Petrel, and Northern Gannet, all of which were present in numbers over Long Island's near-shore ocean waters prior to the storm, and several of which were recorded again considerably after the storm. Most of these species were reported as scattered singletons or not at all. A fair number of Wilson's Storm-Petrels were displaced to some very unusual sites, such as the Hudson River as far north as Sleepy Hollow, Westchester County, and two sites on the northwestern shore of Long Island Sound, but overall numbers were modest, and the species was almost absent along most of the ocean-front.

The paucity of these bread and butter species, in contrast to exceptional numbers of locally highly unusual species (notably Sooty and Bridled Terns and Leach's Storm-Petrel), is not unique to *Irene* but is rather an enduring enigma of tropical cyclones in our region. One often-heard argument is that Wilson's Storm-Petrels are recorded ashore and inland so infrequently because they have left our shelf waters prior to the fall hurricane season. This view is supported to some extent by data from Hurricane *Belle*, which struck Long Island on the relatively early date of 10 August 1976. *Belle* originated north of the Bahamas (much farther north and west than *Irene*), traveled entirely over water before making landfall near Jones Beach, and produced unusual birds mostly in a relatively small area east of the landfall, specifically the area between Moriches and Shinnecock Inlets (A. J. Lauro, *The Kingbird* 26: 184-189). *Belle* yielded just one Sandwich Tern, one Bridled Tern, and no Sooty Terns, but she produced 15 Cory's Shearwaters in Shinnecock Bay and 100+ Wilson's Storm-Petrels at Smith Point County Park, just west of Moriches Inlet.

In contrast, almost all of the Wilson's Storm-Petrels observed in New York during *Irene* were recorded near the storm's center or to its west, with only a scant few to the east, along the ocean coast. Why so few were recorded there is difficult to say, but this is the rule rather than the exception for Long Island's tropical cyclones. In the case of *Irene*, it is highly implausible that our common summer pelagic species had already left the region by late August, especially given the reappearance of small numbers of Wilson's Storm-Petrels along the ocean coast two weeks later and the presence of large numbers of Great Shearwaters inshore through November. Perhaps our local seabirds are often able to dodge hurricanes, much as ships do, by knowing the regional land- and seascapes and by sensing a storm's approach and shifting eastward more rapidly than the wind field advances.

Another pattern concerns the coastal southern species so prominent following many mid-late 20th Century storms. This cohort showed little indication of significant transport into the region, and it was difficult to discern any increase in numbers of Royal Tern, Black Skimmer, and American Oystercatcher, especially in areas where these species were already most numerous before the storm. Away from the outer coast, however, observers recorded decidedly large numbers of several maritime species, and, at the very least, there were major displacements of Laughing Gulls up the Hudson River, single Royal and Least Terns as far up the Hudson River as Piermont Pier, Rockland County, and a Piping Plover to an Eastport sod field, well north of Sunrise Highway, Suffolk County. Among the records most difficult to characterize are a Black-necked Stilt at Sleepy Hollow, an American Avocet at Jones Inlet, and several Marbled Godwits at non-traditional sites on Long Island. Although surely influenced individually by *Irene*, these birds might just as easily have been present nearby prior to the storm as swept northward from the Outer Banks or Delmarva. Overall, it would seem that a large proportion of records for this cohort pertain to birds already present in our area before the storm struck, but evidence that at least some were transported from afar is furnished by the impressive showings made by Sandwich Tern (25+) and Brown Pelican (7), two coastal-southern species whose normal distributions have not yet extended northward to include New York.

We can state categorically, however, that *Irene* did not displace the "Hatteras cohort" on any scale comparable to many storms of the last century. Consider that Hurricanes *Carol* and *Edna* (31 August & 11 September 1954) brought to Long Island seven American Oystercatchers, seven Wilson's Plovers, two Gull-billed Terns, and 60 Royal Terns at a time when all were very rare birds here (and furthermore yielded our first-ever records of Boat-tailed Grackle). And note that *Donna* produced an abundance of coastal-southern species that was almost inconceivable in 1960: 28 Gull-billed, nine Sandwich, 300 Royal, and 400 Caspian Terns, and 1200 Black Skimmers!

As noted above, *Irene*'s impacts were extraordinarily large and broad and included a very large proportion of the species known to be affected by storms at this season. For example, shorebirds that undertake long trans-oceanic flights were well represented. In this category, 10 Hudsonian Godwits at Floyd Bennett

Field, Brooklyn and several large and widely distributed flocks of Red-necked Phalaropes were certainly the most noteworthy consequences of this storm. A smattering of American Golden-Plovers, Whimbrels, and Buff-breasted and Pectoral Sandpipers were obviously storm-related, but less unusual in an historical context.

It must be remembered that our salt marshes were completely submerged, and that all sorts of coastal species were forced into compromising circumstances during the height of the storm. Birders driving Ocean Parkway on Sunday morning had to take great care not to crush the many shorebirds forced up onto the roadsides and even the roadway itself. A striking illustration of local displacement was furnished by a Nassau County rehabilitator who received 17 Clapper Rails into care, mostly rescued from people's yards. On the other hand, vast numbers of shorebirds surely went undetected because of the complete lack of access to Moriches and Shinnecock Inlets. On the whole, however, the balance of shorebird records at hand doesn't stand out markedly against ordinary expectations for the date—especially in comparison to the records of deep-water pelagic species.

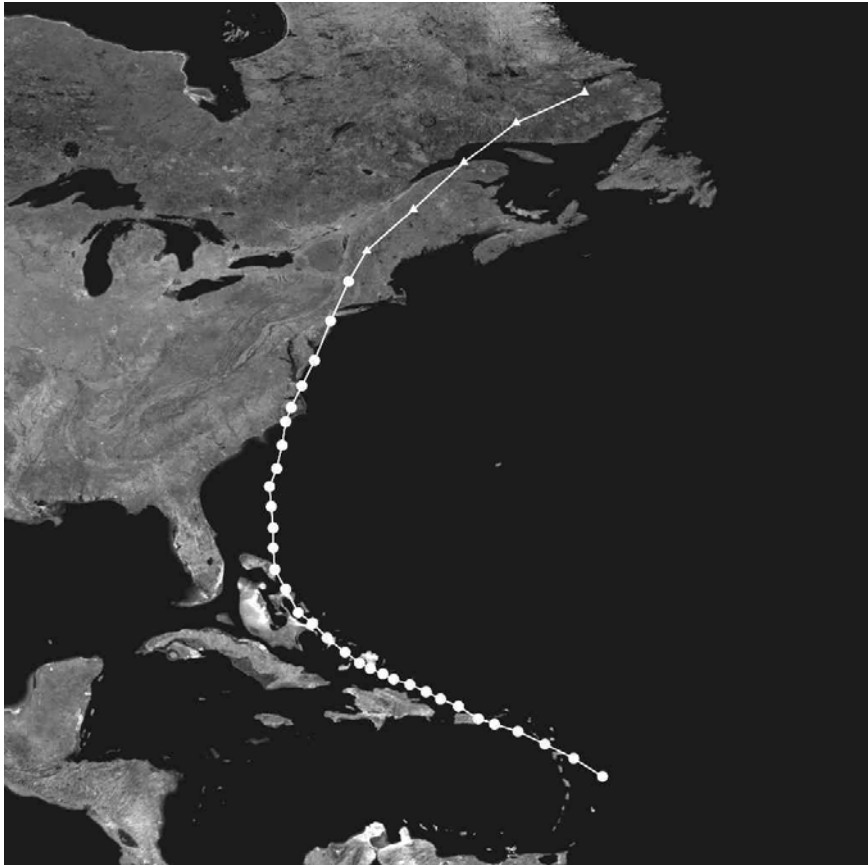
All three jaeger species were recorded during the storm, but in small numbers for Parasitic and just two each of the two rarer species. Three Arctic Terns were reported (but not photographed), and there were no reports of Sabine's Gull in the state. No discussion of storm influences on coastal birds during late summer would be complete without consideration of Black Tern and Lesser Black-backed Gull. These species are particularly enigmatic because their spikes in apparent abundance can occur variously before, during, or after a storm. During *Irene*, small numbers of Black Terns were found in all sorts of unusual settings, such as one seen at the height of the morning's southeasterly winds being blown forcibly backwards, bill pointing resolutely seaward, across Fire Island Inlet and over the Oak Beach thickets, and others resting on inland turf fields. Most extraordinary was a flock of 300-400 at West Meadow Beach, Stony Brook—a North Shore setting lacking prior records on this scale. On the other hand, counts from traditional staging areas on eastern Long Island seemed within normal bounds before, during and immediately after the storm—then gradually rose to record levels weeks later! In the case of Lesser Black-backed Gull, storm impacts were even more difficult to detect. Small numbers of immatures were seen at sites near where larger numbers were known to have summered, and the season's first arriving adults were detected during and immediately after *Irene*. In both cases, it is easier to construe these birds as somehow managing to be precisely where they wanted to be, rather than as being displaced by the storm.

As might be expected, landbirds were extremely inconspicuous during the storm. A number of observers reported seeing and hearing Bobolinks during the storm, and a number of Common Nighthawks were seen at odd sites by day during the afternoon of 28 August. A Yellow-throated Warbler at Montauk the day after the storm was conceivably a storm bird, but it is difficult to imagine any connection between the storm and a subsequent report of a Great Kiskadee along the Hudson River in Manhattan! Although that bird's provenance is highly

dubious, a number of southeastern landbird species were recorded in New York during the fall, and it will be a challenge to infer the connections, if any, between these records and Tropical Storm *Irene*.

ACKNOWLEDGMENTS

I wish to thank the many observers who contributed reports. I'm especially grateful to P. A. Buckley and Doug Gochfeld for sharing their thoughts about *Irene* in particular and New York's long history of storm birds more generally.



The track of Hurricane *Irene*, August 2011.

Public domain; accessed from: http://en.wikipedia.org/wiki/File:Irene_2011_track.png